

NCIC HPV
Sent by: Mary-Beth
Weaver

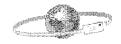
07/03/2003 10:39 AM

To: NCIC HPV, moran.matthew@epa.gov

cc:

Subject: Environmental Defense comments on Diethylenetriamine,

1,7-bis(1,3-dimethylbutylidene) CAS# 10595-60-5



Richard\_Denison@environmentaldefense.org on 06/26/2003 06:11:29 PM

To: oppt.ncic@epamail.epa.gov, hpv.chemrtk@epamail.epa.gov, Rtk Chem/DC/USEPA/US@EPA, Karen

Boswell/DC/USEPA/US@EPA, barter@ppg.com

cc: MTC@mchsi.com, kflorini@environmentaldefense.org, rdenison@environmentaldefense.org

Subject: Environmental Defense comments on Diethylenetriamine, 1,7-bis(1,3-dimethylbutylidene) CAS#

10595-60-5

(Submitted via Internet 6/26/03 to oppt.ncic@epa.gov, hpv.chemrtk@epa.gov, boswell.karen@epa.gov, chem.rtk@epa.gov, MTC@mchsi.com, and barter@ppg.com)

Environmental Defense appreciates this opportunity to submit comments on the robust summary/test plan for Diethylenetriamine, 1,7-bis(1,3-dimethylbutylidene) CAS# 10595-60-5.

Air Products and Chemicals, Inc. and PPG Industries, Inc., in response to EPA's High Production Challenge, have submitted a brief Robust Summary/Test Plan for diethylenetriamine, 1,7-bis(1,3-dimethylbutylidene). We appreciate that both the Robust Summary and Test Plan are necessarily brief because the properties of this chemical make most characterization of its chemical/physical properties and actual testing difficult or impossible; the compound does not exist intact in the absence of at least 30% methyl isobutyl ketone (MIBK), and upon contact with water it rapidly hydrolyzes (>90%) within five minutes to MIBK and dicthylenetriamine (DETA). Thus, the sponsor addresses many of the SIDS elements requested as part of the HPV Challenge through theoretical calculations or by bridging from data for the two degradation products MIBK and DETA. Fortunately, considerable data are available for both MIBK and DETA and a great deal of this information is available on the EPA HPV website.

The limited animal toxicity tests that have been done with diethylenetriamine, 1,7-bis(1,3-dimethylbutylidene) have of necessity used a test material containing MIBK, which has low acute toxicity. Results of these studies indicate diethylenetriamine, 1,7-bis(1,3-dimethylbutylidene) also has low acute toxicity. Due to its rapid hydrolysis to MIBK and DETA, further mammalian toxicity and ecotoxicity tests performed on diethylenetriamine, 1,7-bis(1,3-dimethylbutylidene) would yield results largely if not entirely redundant with those obtained using mixtures of these two degradation compounds, both of which are relatively non-acutely toxic and do not persist in the environment. Thus, we agree with Air Products and Chemicals, Inc. and PPG Industries, Inc. that further ecotoxicity and mammalian toxicity tests are not warranted for diethylenetriamine, 1,7-bis(1,3-dimethylbutylidene). However, we feel that tests for genotoxicity can and should be conducted. This suggestion is based on the facts that diethylenetriamine, 1,7-bis(1,3-dimethylbutylidene) is produced and used in large volumes, resulting in significant potential for human exposure (including by contact through paint products), it does exist (if briefly) in aqueous environments, and genotoxic effects can occur very rapidly.

Thank you for this opportunity to comment.

Hazel B. Matthews, Ph.D. Consulting Toxicologist, Environmental Defense

Richard Denison, Ph.D. Senior Scientist, Environmental Defense